

Serial No. 09/988,688

LISTING OF CLAIMS:

1. (Currently amended) A spark plug comprising:
a metal shell;
a center electrode retained in said metal shell and insulated from said metal shell; and
a ground electrode extending horizontally from said metal shell and opposed to one of a
tip end and an outer peripheral surface of said center electrode to define a spark gap between said
ground electrode and said center electrode, said ground electrode being connected to said metal
shell through a laser fused weld,

wherein said ground electrode is in axial alignment with the one if the one includes said
tip end and wherein the ground electrode is in lateral alignment with the one if the one includes
said outer peripheral surface.

2. (Previously presented) A spark plug as set forth in claim 1, wherein the whole of said
ground electrode is made of an alloy and connected at an end thereof directly through the laser
fused weld to said metal shell.

3. (Previously Presented) A spark plug as set forth in claim 1, wherein a depth of the
weld between said ground electrode and said metal shell is about 0.3 mm to 1.5 mm.

4. (Original) A spark plug as set forth in claim 1, wherein said metal shell is made of an
Fe-base alloy containing one of 0.15% by weight or less of S, 0.35% by weight or less of Si,
0.25% by weight or less of C, 1.5% by weight or less of Mn, and 0.1% by weight or less of P.

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5. (Original) A spark plug as set forth in claim 1, wherein said metal shell is made of an Fe-base alloy containing 0.15% by weight or less of S, 0.35% by weight or less of Si, 0.25% by weight or less of C, 1.5% by weight or less of Mn, and 0.1% by weight or less of P.

6. (Original) A spark plug as set forth in claim 1, wherein said ground electrode is made of an alloy containing a main component of 50 Wt % or more of Pt and an additive of at least one of Rh, Ir, Os, Ni, W, Pd, and Ru.

7. (Original) A spark plug as set forth in claim 1, wherein said ground electrode is made of an alloy containing a main component of 50 Wt % or more of Ir and an additive of at least one of Rh, Pt, Os, Ni, W, Pd, and Ru.

8. (Previously presented) A spark plug as set forth in claim 1, wherein said ground electrode is made of an Ir alloy including a main component of 50 Wt% or more of Ir and connected directly to said metal shell.

9. (Canceled).

10. (Previously presented) A spark plug as set forth in claim 2, wherein a depth of the weld between said ground electrode and said metal shell is about 0.3 mm to 1.5 mm.

11. (Original) A spark plug as set forth in claim 8, wherein said metal shell is made of an Fe-base alloy containing one of 0.15% by weight or less of S, 0.35% by weight or less of Si, 0.25% by weight or less of C, 1.5% by weight or less of Mn, and 0.1% by weight or less of P.

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12. (Original) A spark plug as set forth in claim 8, wherein said metal shell is made of an Fe-base alloy containing 0.15% by weight or less of S, 0.35% by weight or less of Si, 0.25% by weight or less of C, 1.5% by weight or less of Mn, and 0.1% by weight or less of P.

13. (Original) A spark plug as set forth in claim 8, wherein said ground electrode is made of an alloy containing a main component of 50 Wt % or more of Ir and an additive of at least one of Rh, Pt, Os, Ni, W, Pd, and Ru.

14. (Canceled)

15. (Previously presented) A spark plug as set forth in claim 1, wherein the center electrode includes a tip portion made of an Ir alloy.

16. (Canceled)

17. (Previously presented) A spark plug as set forth in claim 1, wherein the center electrode includes a tip portion made of a Pt alloy.

18. (Previously presented) A spark plug as set forth in claim 8, wherein the center electrode includes a tip portion made of an Ir alloy.

19. (Canceled)

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20. (Previously presented) A spark plug as set forth in claim 8, wherein the center electrode includes a tip portion made of a Pt alloy.

21. (Previously Presented) A spark plug as set forth in claim 8, wherein the ground electrode is L-shaped.